

REMARKS

Claims 1-38 are pending in the present application. Claim 32 is amended to correct a typographical error. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 102, Anticipation

The Examiner has rejected Claims 1-38 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,584,559 B1 to Huh et al ("*Huh*"). This rejection is respectfully traversed.

With respect to Claim 1, the Examiner states:

As per claim 1, Huh et al teach a method for updating a current boot code in a data processing system in which the current boot code is used to load an operating system [fig. 3; col.1, lines 16-17; col. 2, lines 46-56; col. 3, lines 44-46; col. 4, lines 24-38], the method comprising the data processing system implemented steps of:

loading a current boot code from a non-volatile memory [inherent step in process of booting a system; col. 3, lines 33-35; col. 4, lines 24-25];

initiating a boot sequence using the current boot code [fig. 3; col. 4, lines 24-25];

searching a storage device for an updated boot code [fig. 3; col. 4, lines 24-38; searching if new firmware is present or not and firmware is an ordered set of instructions and/or data that is used in booting computational system; col. 1, lines 16-17]; and

updating the current boot code [fig. 3; col. 4, lines 24-38; processor determines whether any new firmware is present to upgrade or replace the old firmware].

Office Action, dated July 28, 2003.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or

process a prior art reference discloses, not on what the reference broadly teaches. *Kulman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983).

In this particular case, each and every element of the presently claimed invention is not shown within *Huh* arranged as in rejected Claim 1. Claim 1 reads as follows:

1. A method for updating a current boot code in a data processing system in which the current boot code is used to load an operating system, the method comprising the data processing system implemented steps of:
 - loading a current boot code from a non-volatile memory;
 - initiating a boot sequence using the current boot code;
 - searching a storage device for an updated boot code** for the operating system in response to initiating the boot sequence; and
 - updating the current boot code in the non-volatile memory** prior to loading the operating system for the data processing system if the updated boot code is present. (Emphasis added.)

Specifically, *Huh* does not show or disclose searching a storage device for an updated boot code, and updating the current boot code in the non-volatile memory, as in Claim 1.

In the cited text of *Huh*, the Examiner points to the following sections of *Huh* as teaching these particular features:

'Firmware' is an ordered set of instructions and/or data that is used in booting a computational system.

The nonvolatile memory 26 includes a boot code 42 and old firmware 46 stored in permanent (nonwritable) ROM 50 and new firmware 54 stored in nonpermanent ROM 56... Referring to FIG. 3, the boot sequence of FIG. 3 is initiated 200 (i.e., the system is rebooted).

During the reboot, the processor 14 reads 204 the permanent boot code 42. As will be appreciated, the boot code 42 directs the processor 14 to read any new firmware as part of the boot sequence, which requires the processor 14 to determine 208 whether any new firmware 54 is present to upgrade or replace the old firmware 46.

If no new firmware is present, the processor 14 reads and executes the old firmware 46 and completes the booting process using the old firmware.

If new firmware is present, the processor 14 determines 212 whether or not the new firmware 54 has

been previously validated, such as in the downloading operation described above or in a previous booting operation.

Huh, Col. 1, lines 16-17 -- Col. 3, lines 33-35 -- Col. 4, lines 24-38.

As can be seen, these sections of *Huh* cited by the Examiner teach only that firmware is used in booting a computational system, a processor determines whether new firmware is present to upgrade or replace old firmware, and that firmware is upgraded. Also, these sections teach that, during a reboot, the processor reads the permanent boot code. As such, further explaining the rejection, the Examiner states:

loading a current boot code from a non-volatile memory [inherent step in process of booting a system...];
searching a storage device for an updated boot code [...searching if new firmware is present or not and firmware is an ordered set of instructions and/or data that is used in booting a computational system...]; and
updating the current boot code [...processor determines whether any new firmware is present to upgrade or replace the old firmware].

Office Action dated July 28, pages 2-3. Notwithstanding the Examiner's explanation, nowhere in these sections does *Huh* teach that a storage device is searched for an updated boot code, and a current boot code is updated with the updated boot code.

Specifically, *Huh* discloses that new firmware is written into non-volatile memory. *Huh* also discloses that the non-volatile memory includes a boot code and old firmware stored in permanent (nonwritable) ROM, and new firmware stored in non-permanent ROM (the non-permanent ROM is writable). Furthermore, according to the text describing the boot/reboot sequence in the flowchart of Figure 3 in *Huh*:

Referring to FIG. 3, the boot sequence of FIG. 3 is initiated 200 (i.e., the system is rebooted). **During the reboot, the processor 14 reads 204 the permanent boot code 42.** As will be appreciated, the boot code 42 directs the processor 14 to read any new firmware as part of the boot sequence, which requires the processor 14 to determine 208 whether any new firmware 54 is present to upgrade or replace the old firmware 46. (Emphasis added.)

Huh, Col. 1, lines 24-28 – Col. 3, lines 33-38 – Col. 4, lines 23-31. In other words, *Huh* teaches that the boot code is stored in permanent, non-writable memory, and new firmware is stored in non-permanent, writable memory. Following the boot/reboot loop in the flowchart of Figure 3, for booting or rebooting, the processor in *Huh* always reads (and does not write over or erase) the permanent boot code. As such, the permanent boot code disclosed in *Huh* cannot be updated. Therefore, *Huh* does not disclose, teach or otherwise suggest searching a storage device for an updated boot code, and updating the current boot code, as in Claim 1. As such, each and every feature of Claim 1 is not shown within *Huh* as arranged in Claim 1.

Independent Claims 10, 15, 23, 32, 37 and 38 contain features similar to those of Claim 1 (e.g., searching a storage device for an updated boot code, updating the current boot code, and the like) and are patentable over *Huh* for the same reasons. Also, the dependent Claims 2-9, 11-14, 16-22, 24-31 and 33-36 depending from these independent claims are patentable for the same reasons. Additionally, these claims include other combinations of features not taught by *Huh*.

Therefore, the rejection of Claims 1-38 under 35 U.S.C. § 102(e) has been overcome.

Furthermore, *Huh* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Huh* actually teaches away from the presently claimed invention because, as discussed above, *Huh* teaches reading a permanent boot code to initiate booting or rebooting a system, as opposed to searching for an updated boot code and updating a current boot code prior to loading an operating system, as in the presently claimed invention. Absent the Examiner pointing out some teaching or incentive to implement *Huh* with the features of searching for an updated boot code and updating a current boot code prior to loading an operating system, one of ordinary skill in the art would not be led to modify *Huh* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Huh* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the Applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

II. Conclusion

It is respectfully urged that the subject application is patentable over *Huh* and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: October 28, 2003

Respectfully submitted,



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